

# FUND 402

## SEWER CONSTRUCTION IMPROVEMENTS

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### ***Board of Supervisors' Adjustments***

***The following funding adjustments reflect all changes to the FY 2004 Advertised Budget Plan, as approved by the Board of Supervisors on April 28, 2003:***

- ◆ The Board of Supervisors made no changes to the FY 2004 Advertised Budget Plan.

***The following funding adjustments reflect all approved changes to the FY 2003 Revised Budget Plan from January 1, 2003 through April 21, 2003. Included are all adjustments made as part of the FY 2003 Third Quarter Review:***

- ◆ An increase of \$3,637,000 was required for the repair and replacement of 1,950 linear feet of sewer lines for several County areas as identified by the County's sewer rehabilitation and repair program. This increase was completely offset by an increase in the Transfer In from Fund 400, Sewer Revenue.

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### ***County Executive Proposed FY 2004 Advertised Budget Plan***

#### **Purpose**

Fund 402, Sewer Construction Improvements, provides for wastewater management construction projects and is funded by system revenues (e.g., Sewer Service Charges, Availability Fees, and Connection Fees) through a transfer of funds from Fund 400, Sewer Revenue. All projects in Fund 402 are supported by sewer system revenues and are included in the Summary of Capital Projects.

#### **FY 2004 Initiatives**

In FY 2004, an amount of \$31,534,000 is included in Fund 402, Sewer Construction Improvements. Funding for the following projects is provided through Fund 400, Sewer Revenue, including \$8,400,000 for the payment to the District of Columbia Water and Sewer Authority (DCWASA) for the County's share of the project costs associated with the upgrade of the DC Blue Plains Wastewater Treatment Plant; \$1,000,000 represents the County's share of nitrogen removal costs for the Arlington Treatment Plant Upgrade; \$500,000 is for Pump Station Renovations; \$9,930,000 is for Alexandria Sanitation Authority (ASA) Plant Improvements based on the County's share of construction costs to upgrade the ASA treatment plant; \$3,000,000 provides for the replacement of the 20-year-old Dogue Creek Force Main based on the aging and deteriorating condition of the force main; \$50,000 is for Integrated Sewer Metering to provide for the continuation of the agency's Sewer Meter Replacement Program; \$8,500,000 is for the Sewer Replacement and Transmission Program to provide for repair, replacement, and renovation of aging sewer lines; and \$154,000 provides for the as-built sewer plans for line segments not previously identified.

#### **Funding Adjustments**

***The following funding adjustments reflect all approved changes to the FY 2003 Revised Budget Plan since passage of the FY 2003 Adopted Budget Plan. Included are all adjustments made as part of the FY 2002 Carryover Review and all other approved changes through December 31, 2002:***

- ◆ As part of the *FY 2002 Carryover Review*, the Board of Supervisors approved an increase of \$71,492,795 due to the carryover of unexpended project balances of \$66,670,795 and an increase of \$4,822,000 for the installation of 16,000 linear feet of sewer line for two Extension and Improvement projects.

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A Fund Statement, a Summary of Capital Projects and Project Detail Tables for each project funded in FY 2004 are provided on the following pages. The Summary of Capital Projects may include some projects without a Total Project Estimate amount. These projects are considered "continuing" projects or projects for which funding is necessary on an ongoing basis (e.g., a contingency or planning project). The Project Detail Tables include project location, description, source of funding, and completion schedules.

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### FUND STATEMENT

Fund Type G40, Enterprise Funds

Fund 402, Sewer Construction Improvements

	FY 2002 Actual	FY 2003 Adopted Budget Plan	FY 2003 Revised Budget Plan	FY 2004 Advertised Budget Plan	FY 2004 Adopted Budget Plan
<b>Beginning Balance</b>	<b>\$51,467,138</b>	<b>\$0</b>	<b>\$66,670,795</b>	<b>\$0</b>	<b>\$0</b>
Revenue:					
Revenue from the Commonwealth	\$0	\$0	\$0	\$0	\$0
Total Revenue	\$0	\$0	\$0	\$0	\$0
Transfer In:					
Sewer Revenue (400)	\$61,762,763	\$45,712,000	\$54,171,000	\$31,534,000	\$31,534,000
Total Transfer In	\$61,762,763	\$45,712,000	\$54,171,000	\$31,534,000	\$31,534,000
<b>Total Available</b>	<b>\$113,229,901</b>	<b>\$45,712,000</b>	<b>\$120,841,795</b>	<b>\$31,534,000</b>	<b>\$31,534,000</b>
Total Expenditures	\$46,559,106	\$45,712,000	\$120,841,795	\$31,534,000	\$31,534,000
<b>Total Disbursements</b>	<b>\$46,559,106</b>	<b>\$45,712,000</b>	<b>\$120,841,795</b>	<b>\$31,534,000</b>	<b>\$31,534,000</b>
<b>Ending Balance</b>	<b>\$66,670,795</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>

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### FY 2004 Summary of Capital Projects

#### Fund: 402 Sewer Construction Improvements

Project #	Description	Total Project Estimate	FY 2002 Actual Expenditures	FY 2003 Revised Budget	FY 2004 Advertised Budget Plan	FY 2004 Adopted Budget Plan
G00901	DC Treatment Center - Blue Plain	\$61,891,342	\$21,961.88	\$17,388,604.96	\$8,400,000	\$8,400,000
G00903	Arlington Wastewater Treatment	12,457,392	564,232.00	1,468,870.00	1,000,000	1,000,000
I00351	Pump Station Renovations		1,980,459.75	8,970,902.19	500,000	500,000
I00355	Pump And Haul - Wylie/Gunston	2,900,000	23,782.24	262,224.59	0	0
I00904	ASA Wastewater Treatment Plant	178,466,723	29,158,747.85	24,923,830.03	9,930,000	9,930,000
I00905	Bell Haven Replacement	1,491,742	50,028.40	150,556.82	0	0
L00117	Rehab/Replacement		0.00	0.00	3,000,000	3,000,000
N00321	Lower Potomac Exp 54 MGD	105,269,000	2,918,487.61	18,880,289.91	0	0
T00124	Rocky Run Pump Station	4,335,926	1,100,000.00	2,887,203.78	0	0
X00445	Integrated Sewer Metering		22,377.44	584,687.88	50,000	50,000
X00823	Extension Projects FY1993	3,779,003	32,606.78	1,365,064.20	0	0
X00824	Extension Projects FY1994	1,258,000	146.74	243,618.59	0	0
X00825	Extension Projects FY1995	3,049,001	163.77	358,187.57	0	0
X00826	Extension Project FY1996	14,359,349	1,116,780.90	9,270,991.21	0	0
X00900	Replacement Transmission		0.00	759,576.00	0	0
X00905	Replacemt & Transmission		8,798,787.62	13,649,752.72	8,500,000	8,500,000
X00906	Sewer Line Enlargement		161,036.14	6,614,547.73	0	0
X00908	Sewer Line Replacement - 5 Inch		0.00	136,920.04	0	0
X00910	Replacement and Renewal		422,531.90	10,944,283.81	0	0
X00930	Sewer Relocation - VADOT		157,931.66	321,813.34	0	0
X00935	Rt. 50/66 Sewer Agreement Reserve	1,000,000	0.00	1,000,000.00	0	0
X00940	Developer Projects County Costs		0.00	148,689.09	154,000	154,000
X00942	Accotink PS Rehabilitation	2,838,883	29,043.71	272,921.98	0	0
X00998	Sewer Contingency Project		0.00	185,686.27	0	0
X00999	Sewer Revolving Fund		0.00	52,572.00	0	0
<b>Total</b>		<b>\$393,096,361</b>	<b>\$46,559,106.39</b>	<b>\$120,841,794.71</b>	<b>\$31,534,000</b>	<b>\$31,534,000</b>

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## SEWER CONSTRUCTION IMPROVEMENTS

<b>G00901</b>	<b>DC Treatment Blue Plains</b>
Blue Plains Sewer Shed	Countywide
<b>Description and Justification:</b> This project is for the payment to DCWASA for Fairfax County's share of the projected costs associated with the upgrade to the DC Blue Plains Wastewater Treatment Plant. The County pays for approximately 8.4 percent of the total costs for the design and construction of the upgrade for nitrification and sludge handling facilities. Fairfax County's estimated share of the project cost is \$61,891,342 over a six-year period. Funding of \$8,400,000 provides for the County's FY 2004 share based on DCWASA's projected expense summary and construction schedule.	

	Total Project Estimate	Prior Expenditures	FY 2002 Expenditures	FY 2003 Revised Budget Plan	FY 2004 Advertised Budget Plan	FY 2004 Adopted Budget Plan	Future Years
Land Acquisition	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Design and Engineering	21,962	0	21,962	0	0	0	0
Construction	35,387,991	0	0	15,833,638	8,400,000	8,400,000	11,154,353
Interjurisdictional Payment	26,481,389	24,926,422	0	1,554,967	0	0	0
<b>Total</b>	<b>\$61,891,342</b>	<b>\$24,926,422</b>	<b>\$21,962</b>	<b>\$17,388,605</b>	<b>\$8,400,000</b>	<b>\$8,400,000</b>	<b>\$11,154,353</b>

Source of Funding				
General Fund	General Obligation Bonds	Transfers from Other Funds	Sewer Revenue	Total Funding
\$0	\$0	\$0	\$8,400,000	\$8,400,000

Completion Schedule				
Land Acquisition Completion	Engineer/Architect Contract Award	Design Completion	Construction Contract Award	Construction Completion
First Quarter FY 2000	Fourth Quarter FY 2000	Fourth Quarter FY 2000	Various	Fourth Quarter FY 2009

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## SEWER CONSTRUCTION IMPROVEMENTS

<b>G00903</b>	<b>Arlington Wastewater Treatment</b>
Arlington Sewer Shed	Countywide
<b>Description and Justification:</b> This project provides for the expansion and improvement of the Arlington County Wastewater Treatment Plant. The Fairfax County Board of Supervisors has approved a contract with Arlington County for the purchase of permanent sewage treatment capacity allocation of three million gallons per day in the expanded and improved Arlington Wastewater Treatment Plant. Fairfax County purchases this treatment capacity through contributions to the Arlington construction project. Funding in the amount of \$1,000,000 is required to meet the County's obligation in FY 2004.	

	Total Project Estimate	Prior Expenditures	FY 2002 Expenditures	FY 2003 Revised Budget Plan	FY 2004 Advertised Budget Plan	FY 2004 Adopted Budget Plan	Future Years
Land Acquisition	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Design and Engineering	0	0	0	0	0	0	0
Construction	3,566,719	533,617	564,232	1,468,870	1,000,000	1,000,000	0
Interjurisdictional Payment	8,890,673	8,890,673	0	0	0	0	0
<b>Total</b>	<b>\$12,457,392</b>	<b>\$9,424,290</b>	<b>\$564,232</b>	<b>\$1,468,870</b>	<b>\$1,000,000</b>	<b>\$1,000,000</b>	<b>\$0</b>

Source of Funding				
General Fund	General Obligation Bonds	Transfers from Other Funds	Sewer Revenue	Total Funding
\$0	\$0	\$0	\$1,000,000	\$1,000,000

Completion Schedule				
Land Acquisition Completion	Engineer/Architect Contract Award	Design Completion	Construction Contract Award	Construction Completion
NA	First Quarter FY 2000	First Quarter FY 2001	First Quarter FY 2001	Fourth Quarter FY 2005

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## SEWER CONSTRUCTION IMPROVEMENTS

<b>I00351</b>	<b>Pump Station Renovations</b>
Countywide	Countywide
<b>Description and Justification:</b> This project provides for the renovation of the existing pumping stations within the Wastewater Management Program. FY 2004 funding in the amount of \$500,000 provides for the rehabilitation of the 50/66 Main Pump Station. This pump station has a capacity of 2.92 million gallons per day (MGD) and needs rehabilitation based on its age, deteriorating condition, and increased maintenance costs at the station.	

	Total Project Estimate	Prior Expenditures	FY 2002 Expenditures	FY 2003 Revised Budget Plan	FY 2004 Advertised Budget Plan	FY 2004 Adopted Budget Plan	Future Years
Land Acquisition		\$5,556	\$0	\$0	\$0	\$0	\$0
Design and Engineering		2,196,920	357,066	942,934	0	0	0
Construction		4,910,610	1,596,550	7,887,968	500,000	500,000	0
Other		181,940	26,844	140,001	0	0	0
Total	Continuing	\$7,295,026	\$1,980,460	\$8,970,902	<b>\$500,000</b>	<b>\$500,000</b>	\$0

Source of Funding				
General Fund	General Obligation Bonds	Transfers from Other Funds	Sewer Revenue	Total Funding
\$0	\$0	\$0	\$500,000	\$500,000

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## SEWER CONSTRUCTION IMPROVEMENTS

<b>I00904</b>	<b>ASA Wastewater Treatment Plant</b>
ASA Sewer Shed	Various
<b>Description and Justification:</b> This project funds the payment to the Alexandria Sanitation Authority for Fairfax County's share of the construction costs associated with the improvements to the Alexandria Wastewater Treatment Plant. The County pays for approximately 60 percent of the total costs of the upgrade for ammonia removal. Funding of \$9,930,000 provides for the County's FY 2004 share based on the projected expense summary. The project has completed the design phase and construction is scheduled for completion in FY 2005. The agency submitted a second application to the Virginia Resource Authority for an additional \$50 million in FY 2002. This funding was approved in the Fall of 2001 and loan proceeds were received in Summer of 2002 to support the County's payments.	

	Total Project Estimate	Prior Expenditures	FY 2002 Expenditures	FY 2003 Revised Budget Plan	FY 2004 Advertised Budget Plan	FY 2004 Adopted Budget Plan	Future Years
Land Acquisition	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Design and Engineering	0	0	0	0	0	0	0
Construction	122,314,548	56,545,145	29,158,748	24,923,830	9,930,000	9,930,000	1,756,825
Other	56,152,175	56,152,175	0	0	0	0	0
<b>Total</b>	<b>\$178,466,723</b>	<b>\$112,697,320</b>	<b>\$29,158,748</b>	<b>\$24,923,830</b>	<b>\$9,930,000</b>	<b>\$9,930,000</b>	<b>\$1,756,825</b>

Source of Funding				
General Fund	General Obligation Bonds	Transfers from Other Funds	Sewer Revenue	Total Funding
\$0	\$0	\$0	\$9,930,000	\$9,930,000

Completion Schedule				
Land Acquisition Completion	Engineer/Architect Contract Award	Design Completion	Construction Contract Award	Construction Completion
N/A	First Quarter FY 2000	First Quarter FY 2000	First Quarter FY 2001	Fourth Quarter FY 2005



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## SEWER CONSTRUCTION IMPROVEMENTS

<b>L00117</b>	<b>Dogue Creek Rehab./Replacement</b>
Lower Potomac Sewer Shed	Mount Vernon
<b>Description and Justification:</b> This project provides funds for the replacement of the 20-year-old Dogue Creek Force Main. The Dogue Creek Force Main is approximately 4,350 linear feet of 36-inch trunk line. The existing force main was rehabilitated in FY 1988, however, due to the critical nature of this force main, it has been recommended that a new parallel force be constructed and use the existing force main as a backup to the new force main. There is approximately 9 MGD of sewer flow that cannot be diverted from this force main. FY 2004 funding will allow for the initial study, complete design and engineering services during construction. The construction estimate will be developed during the design phase.	

	Total Project Estimate	Prior Expenditures	FY 2002 Expenditures	FY 2003 Revised Budget Plan	FY 2004 Advertised Budget Plan	FY 2004 Adopted Budget Plan	Future Years
Land Acquisition		\$0	\$0	\$0	\$0	\$0	\$0
Design and Engineering		265,183	0	0	0	0	0
Construction		1,224,125	0	0	3,000,000	3,000,000	2,000,000
Other		18,471	0	0	0	0	0
Total	Continuing	\$1,507,779	\$0	\$0	<b>\$3,000,000</b>	<b>\$3,000,000</b>	\$2,000,000

Source of Funding				
General Fund	General Obligation Bonds	Transfers from Other Funds	Sewer Revenue	Total Funding
\$0	\$0	\$0	\$3,000,000	\$3,000,000

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## SEWER CONSTRUCTION IMPROVEMENTS

<b>X00445</b>	<b>Integrated Sewer Metering</b>
Countywide	Countywide
<b>Description and Justification:</b> This project funds the Wastewater Management's metering program. Flows must be monitored to: 1) determine when the lines are nearing maximum capacity, 2) detect groundwater inflow/infiltration, 3) allow proper billing under interjurisdictional agreements for sewage treatment, and 4) comply with the Virginia Water Control Board regulations requiring metering at all trunk sewer junctions. FY 2004 funding of \$50,000 will provide for the upgrade of existing meters based on the agency's metering replacement schedules.	

	Total Project Estimate	Prior Expenditures	FY 2002 Expenditures	FY 2003 Revised Budget Plan	FY 2004 Advertised Budget Plan	FY 2004 Adopted Budget Plan	Future Years
Land Acquisition		\$0	\$0	\$0	\$0	\$0	\$0
Design and Engineering		41,199	3,030	0	0	0	0
Construction		63,464	0	92,537	0	0	0
Other		1,552,721	19,347	492,151	50,000	50,000	0
<b>Total</b>	Continuing	<b>\$1,657,384</b>	<b>\$22,377</b>	<b>\$584,688</b>	<b>\$50,000</b>	<b>\$50,000</b>	<b>\$0</b>

Source of Funding				
General Fund	General Obligation Bonds	Transfers from Other Funds	Sewer Revenue	Total Funding
\$0	\$0	\$0	\$50,000	\$50,000

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## SEWER CONSTRUCTION IMPROVEMENTS

<b>X00905</b>	<b>Replacement and Transmission</b>
Countywide	Countywide
<b>Description and Justification:</b> This is a continuing project established to implement systematic rehabilitation of the County's more than 3,000 miles of sanitary sewer lines. Rehabilitation options include techniques/products such as slip-lining, instituform, and fold and form. This work is performed by outside contractors. This project completed 20.5 miles of sewer lines in FY 2001, 20 miles in FY 2002 and anticipates 20 miles in FY 2003. Funding of \$5,300,000 is included for the recurring repair, replacement and renovation of approximately 20 miles of sewer lines using predominantly "no dig" technologies in FY 2004. In addition, \$3,200,000 is required to provide for the cleaning of 14 sewer siphons, the rehabilitation of 7 sewer siphons/vaults, and the replacement of 3 line segments.	

	Total Project Estimate	Prior Expenditures	FY 2002 Expenditures	FY 2003 Revised Budget Plan	FY 2004 Advertised Budget Plan	FY 2004 Adopted Budget Plan	Future Years
Land Acquisition		\$122,788	\$1,516	\$33,484	\$0	\$0	\$0
Design and Engineering		1,581,173	94,670	535,399	0	0	0
Construction		49,532,692	8,699,159	13,029,312	8,500,000	8,500,000	0
Other		183,880	3,443	51,557	0	0	0
Total	Continuing	\$51,420,533	\$8,798,788	\$13,649,753	<b>\$8,500,000</b>	<b>\$8,500,000</b>	\$0

Source of Funding				
General Fund	General Obligation Bonds	Transfers from Other Funds	Sewer Revenue	Total Funding
\$0	\$0	\$0	\$8,500,000	\$8,500,000

# FUND 402

## SEWER CONSTRUCTION IMPROVEMENTS

<b>X00940</b>	<b>Developer Projects County Cost</b>
Countywide	Countywide
<b>Description and Justification:</b> This project provides for costs incurred by the Wastewater Planning and Monitoring Division in the Department of Public Works and Environmental Services for the maintenance and review of sewer grid sheets. Funding of \$154,000 in FY 2004 will provide for the preparation of as-built sewer plans for sewer segments not previously identified.	

	Total Project Estimate	Prior Expenditures	FY 2002 Expenditures	FY 2003 Revised Budget Plan	FY 2004 Advertised Budget Plan	FY 2004 Adopted Budget Plan	Future Years
Land Acquisition		\$15,547	\$0	\$0	\$0	\$0	\$0
Design and Engineering		956,304	0	0	0	0	0
Construction		167,583	0	148,689	154,000	154,000	0
Other		1,024	0	0	0	0	0
Total	Continuing	\$1,140,458	\$0	\$148,689	<b>\$154,000</b>	<b>\$154,000</b>	\$0

Source of Funding				
General Fund	General Obligation Bonds	Transfers from Other Funds	Sewer Revenue	Total Funding
\$0	\$0	\$0	\$154,000	\$154,000